6 Main Menu

This chapter describes the functions available from the Main Menu.

Figure 6-1
EnSight Main Menu

Section 6.1, File Menu Functions

Section 6.2, Edit Menu Functions

Section 6.3, Query Menu Functions

Section 6.4, View Menu Functions

Section 6.5, Tools Menu Functions

Section 6.6, Case Menu Functions

Section 6.7, Help Menu Functions

6.1   File Menu Functions

Clicking the File button in the Main Menu opens a pull-down menu which provides access to capabilities which enable you to record and play command files, connect the EnSight Client process to an EnSight Server process, read data into the EnSight Server, load parts, print and save images, save and restore an archive file, and quit from EnSight.
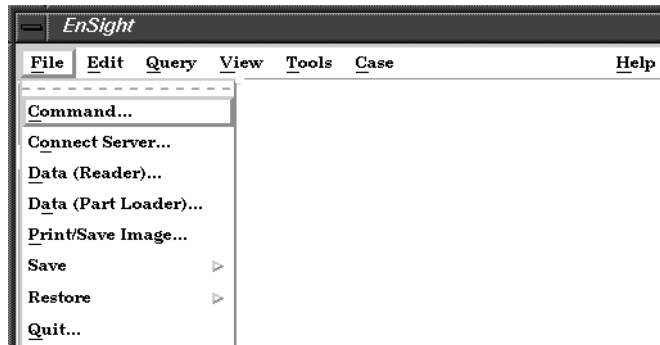
File Pull-down Menu

Figure 6-2
File pull-down menu

Command   Opens the Command dialog which is used to record and play Command Files
Access: Main Menu > Command...

(see Section 2.4, Command Files and How To Record and Play Command Files)

Connect Server   Opens the Connect Server dialog which is used to perform an Auto or Manual connection from the EnSight Client process to an EnSight Server process.
Access: Main Menu > Connect...

For a complete description of the Connection process:

(see How To Connect Automatically)

Data (Reader)   Opens the File Selection dialog which is used to specify files you wish to read into EnSight.
Access: Main Menu > Data (Reader)...

(see Reading and Loading Data Basics, in Section 2.1 and How To Read Data)

Data (Part Loader)   Opens the Data Part Loader dialog which is used to load parts into EnSight.
Access: Main Menu > Data (Part Loader)...

(see Reading and Loading Data Basics, in Section 2.1 and How To Read Data)

Print/Save Image   Opens the Print/Save Image dialog which is used to print or save images from EnSight.
Access: Main Menu > Print/Save Image...

(see Section 2.10, Saving and Printing Graphic Images and How To Print/Save an Image)

Save	Opens a pull-down menu which allows you to choose between the following Save options: Context, Full Backup or Geometric Entities. Access: Main Menu > File > Save
Context...	Opens the Save Current Context dialog where you can specify the name of a context file to be created. This file saves information needed to reproduce the same basic imagery on a different set of data. Access: Main Menu > File > Save > Context... (See How To Save or Restore a Context File)
Full Backup	Opens the Save Full Backup Archive dialog which is used to save an entire session as an Archive file which can later be used to restore EnSight to the same condition present when the Archive file was made. Access: Main Menu > File > Save > Full Backup (see Section 2.5, Archive Files and How To Save and Restore an Archive)
Geometric Entities	Opens the Save Geometric Entities Dialog which is used to save geometric information from EnSight, either EnSight Gold or VRML format. Access: Main Menu > File > Save > Geometric Entities (see Section 2.8, Saving Geometry and Results Within EnSight and How To Save Geometric Entities)
Scenario...	Opens the Save Scenario dialog where you can create a scenario file which can be viewed by CEI's EnLiten product. EnLiten can display any scene created with EnSight and can be run standalone or be embedded in Microsoft applications. Access: Main Menu > File > Save > Scenario... (See How To Save Scenario)
Restore	Opens a pull-down menu which allows you to choose between the following Restore options: Context or Full Backup. stored archive file. Access: Main Menu > File > Restore
Context...	Opens the File Selection dialog where you can specify the name of a context file to be applied. First read in your data, then restore the context. This will do its best to create the same basic imagery (as that when the context file was saved) to your current model. Access: Main Menu > File > Restore > Context... (See How To Save or Restore a Context File)
Full Backup	Opens the Save Full Backup Archive dialog which is used to save an entire session as an Archive file which can later be used to restore EnSight to the same condition present when the Archive file was made. Access: Main Menu > File > Restore > Full Backup (see Section 2.5, Archive Files and How To Save and Restore an Archive)
Quit	Opens the Quit Confirmation dialog which allows you to save a command file or/and an archive file before exiting EnSight. Access: Main Menu > Quit... (see Section 2.5, Archive Files)

6.2   Edit Menu Functions

Clicking the Edit button in the Main Menu opens a pull-down menu which provides access to the following features:
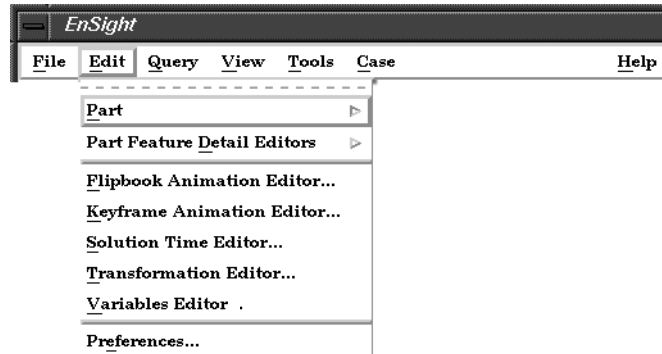

Figure 6-3
Edit pull-down menu

Part

Opens a pull-down menu which allows you to choose between the following part operations:

- Select All   (see Section 3.4, Part Operations and How To Select Parts)

- Select ...   (see Section 3.4, Part Operations and How To Select Parts)

- Delete   (see Section 3.4, Part Operations and How To Delete a Part)

- Assign to Single New viewport   (see Section 3.4, Part Operations)

- Assign to Multiple New viewports (see Section 3.4, Part Operations)

- Copy   (see Section 3.4, Part Operations and How To Copy a Part)

- Group & Ungroup   (see Section 3.4, Part Operations and How To Group Parts)

- Extract   (see Section 3.4, Part Operations and How To Extract Part Representations)

- Merge   (see Section 3.4, Part Operations and How To Merge Parts)

Access: Main Menu > Edit > Part

Part Feature Detail Editors

Opens a pull-down menu which allows you to choose between the following options to open the Feature Detail Editor:

- Selected Part Type   (see Section 3.1, Part Overview and Introduction to Part Creation)

- Contours   (see Section 3.3, Part Editing, Section 7.2, Contour Create/Update, and How To Create Contours)

- Clips   (see Section 3.3, Part Editing, Section 7.5, Clip Create/Update, How To Create Line Clips, How To Create Plane Clips, How To Create Quadric Clips, and How To Create IJK Clips)

- Developed Surfaces   (see Section 3.3, Part Editing, Section 7.9, Developed Surface Create/Update, and How to Create Developed Surfaces)

- Elevated Surfaces   (see Section 3.3, Part Editing, Section 7.7, Elevated

		Surface Create/Update, and How to Create Elevated Surfaces)
	• Isosurfaces	(see Section 3.3, Part Editing, Section 7.3, Isosurface Create/Update, and How to Create Isosurfaces)
	• Model Parts	(see Section 3.3, Part Editing and Introduction to Part Creation)
	• Particle Traces	(see Section 3.3, Part Editing, Section 7.4, Particle Trace Create/Update, and How to Create Particle Traces)
	• Profiles	(see Section 3.3, Part Editing, Section 7.8, Profile Create/Update, and How to Create Profile Plots)
	• Subset Parts	(see Section 3.3, Part Editing, Section 7.16, Subset Parts Create/Update, and How to Create Subset Parts)
	• Tensor glyphs	(see Section 3.3, Part Editing, Section 7.17, Tensor Glyph Parts Create/Update, and How to Create Tensor Glyphs)
	• Vector Arrows	(see Section 3.3, Part Editing, Section 7.6, Vector Arrow Create/Update, and How to Create Vector Arrows)
	• Vortex Cores	(see Section 3.3, Part Editing, Section 7.18, Vortex Core Create/Update, and How To Extract Vortex Cores)
	• Shock Regions/Surfaces	(see Section 3.3, Part Editing, Section 7.19, Shock Surface/Region Create/Update, and How To Extract Shock Surfaces)
	• Separation/Attachment Lines	(see Section 3.3, Part Editing, Section 7.20, Separation/Attachment Lines Create/Update, and How To Extract Separation/Attachment Lines)

Access: Main Menu > Edit > Part Feature Detail Editors...

Flipbook Animation Editor

Opens the Flipbook Animation editor in the Quick Interaction Area which is used to create, save, and restore Flipbook Animation sequences.
Access: Main Menu > Edit > Flipbook Animation Editor...
(see Section 7.14, Flipbook Animation and How To Create a Flipbook Animation)

Keyframe Animation Editor

Opens the Keyframe Animation editor in the Quick Interaction Area which is used to create, save, and restore Keyframe Animation sequences.
Access: Main Menu > Edit > Keyframe Animation Editor...
(see Section 7.15, Keyframe Animation and How To Create a Keyframe Animation)

Solution Time Editor

Opens the Solution Time Editor in the Quick Interaction Area which is used to specify the currently displayed time step in a transient dataset.
Access: Main Menu > Edit > Solution Time Editor...
(see Section 7.13, Solution Time and How To Animate Transient Data)

Transformation Editor

Opens the Transformation Editor dialog which is used to precisely position parts, frames, and tools in the Graphics Window and to Save and Restore Views.
Access: Main Menu > Edit > Transformation Editor...
(see Chapter 9, Transformation Control)

Variables Editor

Opens the Feature Detail Editor (Variables) dialog which is used to obtain information about variables, change the information, and to create new variables.
Access: Main Menu > Edit > Variables Editor...
(see Chapter 4, Variables)

Preferences...   Opens the Preferences dialog which is used to set or modify preference values for the various categories within EnSight.
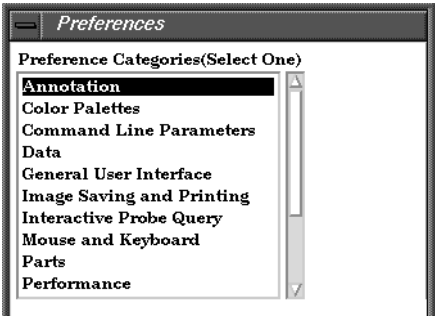
In this area you can set default attributes and preferences which will be used for the current EnSight session. You may also save any of these to the preference file(s) so that they will be the defaults for future invocations of EnSight. Each of the preference categories will now be explained.

Annotation
Preferences
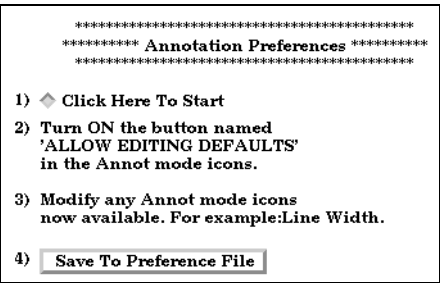
Click Here To Start   Will place you in Annotation mode in EnSight with no annotations selected (default mode). You must do step 2) so that you are allowed to edit annotation defaults. You can then change any annotation attributes desired and they will become the defaults for the session.

Save To Preference File   Will write the current annotation preferences to the preference file for future EnSight sessions.

(see How To Set Annotation Preferences:)

Color Palettes
Preferences
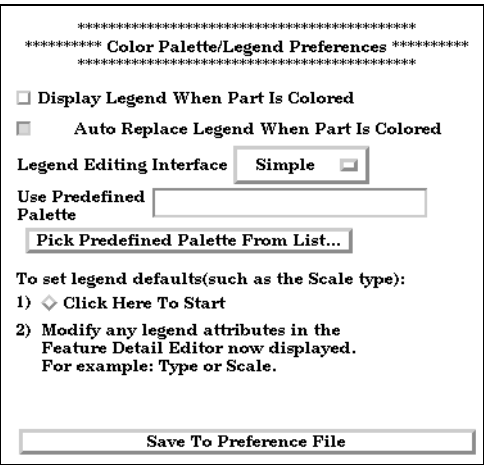
|	
Display Legend When Part is Colored	Will cause the legend to automatically appear when you color a part by a variable.
Auto Replace Legend When Part is Colored	Will cause legends to be automatically replaced when the current legend is no longer in use (i.e. no parts are colored by the variable) and a new variable is in use.
Legend Editing Interface	Can be EnSight's *Simple* or *Advanced* interface.
Use Predefined Palette	Allows you to enter a predefined palette name if you have predefined color palettes.
Pick Predefined Palette From List...	Allows you to pick from your predefined palette list.

Legend Defaults:

Click Here To Start	Will allow you to modify legend default attributes.
Save To Preference File	Will write the current legend and palette preferences to the preference file for future EnSight sessions.

(see How To Set Color Palette Defaults:)

Command Line Parameter Preferences
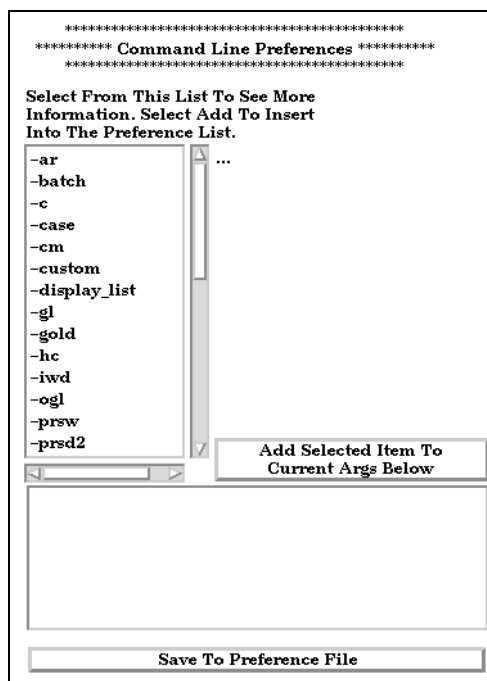
By selecting arguments from the list and hitting:

Add Selected Item To Current Args Below	You can build customized command line preferences.
Save To Preference File	Will save the command line preferences to the preference file for future invocations of EnSight.

(see How To Set Command Line Preferences:)

Data Preferences

```
*********************************************
**********    Data Preferences    **********
*********************************************

Default Data     [                        ]
Directory

If Starting Time Step    [ Last Step ▭ ]
is not specified load

When reading data        [ No Parts ▭ ]
automatically load

Select Below To Toggle Reader Visibility.
(*) Case                            ▲
(*) EnSight 5
(*) ABAQUS
(*) ANSYS RESULTS
(*) ESTET
(*) FAST UNSTRUCTURED
(*) FIDAP NEUTRAL
(*) FLUENT UNIVERSAL
(*) Movie
(*) MPGS 4.1                         ▽

Default Reader   [                        ]

[        Save To Preference File        ]
```

Default Data Directory   Will allow you to specify a default directory for data files.

If Starting Time Step is not specified load   Can be set so that the default starting time step for transient data can be either *Last Step* or *First Step*.

When reading data automatically load   Allows you to have EnSight automatically load *All Parts, First Part, Last Part,* or *No Parts* at startup. If *No Parts* is specified, the Part Loader dialog will be presented to the user at startup.

Select Below To Toggle Reader Visibility   Allows you to specify which data formats will appear in the "Format" pull-down of the Data Reader dialog.

Default Reader   Allows you to specify the default data reader format.

Save To Preference File   Will save the data preferences to the preference file for future invocations of EnSight.

(see How To Set Data Preferences:)

General User Interface Preferences

```
*************************************************
********* General User Interface Preferences *********
*************************************************

□ Tool Tips

□ Large Parts List

▣ Frame Mode Allowed

▣ View Mode Allowed

Record Part Selection In    [ Number ▭ ]
Command Language By

[      Save Above Items To Preference File      ]

[         Modify and Save Icon Layout...        ]

[      Save Size and Position of Main Windows   ]
```

Tool Tips   Will cause pop-up help information to appear when the mouse is placed over certain icons while running EnSight.

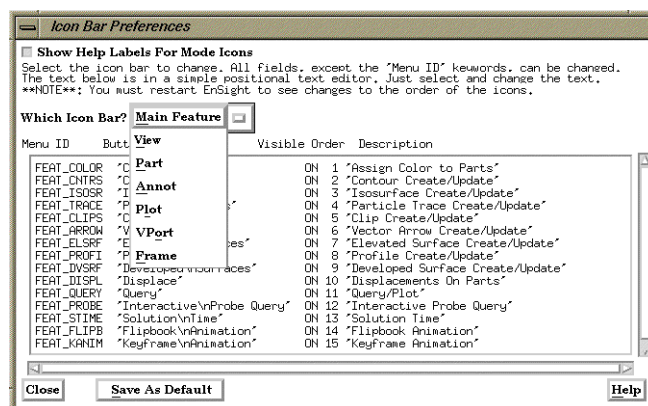|	
Large Parts List	Will cause a separate, larger parts list dialog (which can be expanded) to be used in place of the normal parts list.
Frame Mode Allowed	Will display Frame as a managed mode.
View Mode Allowed	Will display View Mode as a managed mode.
Record Part Selection in Command Language By	Allows you to specify whether the part selections recorded in command language will be by part *Name* or by part *Number*.
Save Above Items To Preference File	Will save the preferences above to the preference file for future invocations of EnSight.
Modify and Save Icon Layout....	Opens the Icon Bar Preferences dialog

Figure 6-4
Icon Bar Preferences

Show Help Labels For Mode Icons	When toggled on, the Icon name will appear beneath each icon in the Mode Icon Bar. You can customize the EnSight GUI by specifying which icons appear and their order in the Feature and Mode Icon Bars. Do **NOT** modify the Menu ID for any function. The other fields for each function may be edited within the dialog. Customization options are:
Button Name	Describes the function of the icon which would be displayed if EnSight was started with no icons (command line function). Further, this is the name which will appear below the each Mode Icon when Show Help Labels For Mode Icons is toggled on.
Visible	Determines the visibility of a feature icon. Must be either ON or OFF.
Order	Determines the order in which the icons appear. A value of 1 will cause the icon to appear leftmost in the Main Feature Icon Bar and uppermost in the Mode Icon Bars.

Description   The text description of the button which will be displayed in the Message Area when the icon is selected. You must click the Save As Default button to save any changes you have made. The Button Name and Order, if modified, will not take effect until you restart EnSight. Changes to Visibility, Description, and Show Help Labels however, will be implemented immediately upon clicking the Save as Default button (and will control these options in future EnSight sessions as well).

When EnSight is started, the icon preferences are initially read from the $ENSIGHT7_HOME/site_preferences directory and are then overwritten by any information in the user's preferences directory.
(see How To Customize Icon Bars)

Save Size and Position of Main Windows   Will record the location and size of the main GUI, and all dialogs that have been opened during the session or are currently open and will make those locations and sizes the default for future sessions of EnSight. Be aware also that if you had a turn-down section open in a dialog (such as General Attributes in the Feature Detail Editor dialog) when you closed it earlier in the session or at the time you choose Save Window Positions, this will be recorded as well and opening that dialog in future sessions will also open that turn-down section within the dialog.
(see How To Save GUI Settings)

(see How To Set General User Interface Preferences:)
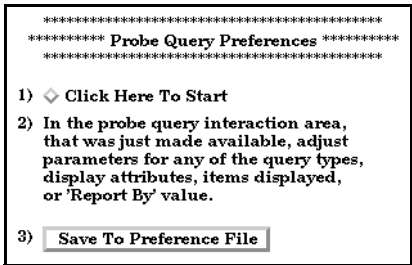
Image Saving and
Printing Preferences

Click Here To Start   Will allow you to modify default attributes for image saving and printing.

Save To Preference File   Will write the current print/save preferences to the preference file for future EnSight sessions.
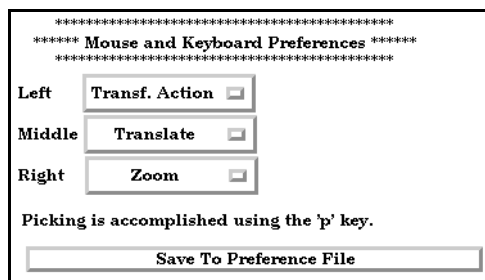
(see How To Set Image Saving and Printing Preferences:)

Interactive Probe
Query Preferences

Click Here To Start   Will allow you to modify default attributes for interactive probe queries.

Save To Preference File   Will write the current interactive probe query preferences to the preference file for future EnSight sessions.

(see How To Set Interactive Probe Query Preferences:)

Mouse and Keyboard
Preferences

```
***********************************************
****** Mouse and Keyboard Preferences ******
***********************************************

Left       Transf. Action  ▣

Middle        Translate     ▣

Right           Zoom        ▣

Picking is accomplished using the 'p' key.

            Save To Preference File
```

Here you can specify the actions of the three mouse buttons. Select the option you wish to assign to each button. The options are as follows:
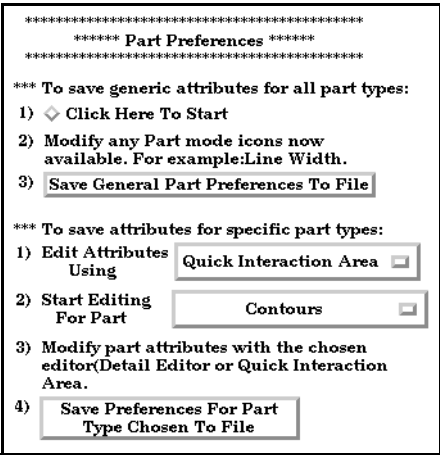
Transf. Action   When this option is chosen (it is the default for the left button), depressing the button and moving the mouse will perform the transformation (rotate, translate, zoom) currently selected in the Transformation Control Area on the model.

Rotate   When this option is chosen, depressing the button and moving the mouse will perform a rotate transformation on the model.

Translate   When this option is chosen, depressing the button and moving the mouse will perform a translate transformation on the model.

Zoom   When this option is chosen, depressing the button and moving the mouse will perform a zoom transformation on the model.

Pick   When this option is chosen, depressing the button will perform a pick operation. If Pick has not been assigned to one of the mouse buttons, the "p" key is used to perform the operation. (see Pick Pull-down Icon in Section 8.4, Part Mode)

Nothing   When this option is chosen, no function is mapped to the mouse button.

Note: One of the Mouse buttons must be assigned to Transf. Action. Macros cannot be assigned to a mouse key which has a function assigned to it. (see How To Customize Mouse Button Actions)

Save To Preference File   Will write the current mouse and keyboard preferences to the preference file for future EnSight sessions.
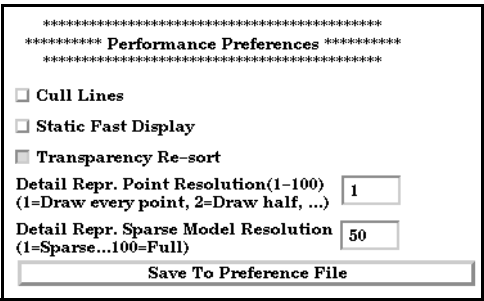
(see How To Set Mouse and Keyboard Preferences:)

Parts

```
*********************************************
****** Part Preferences ******
*********************************************
*** To save generic attributes for all part types:
1)  ◇ Click Here To Start
2)  Modify any Part mode icons now
    available. For example:Line Width.
3)  [ Save General Part Preferences To File ]

*** To save attributes for specific part types:
1) Edit Attributes    [ Quick Interaction Area  ▫ ]
   Using
2) Start Editing       [        Contours         ▫ ]
   For Part
3) Modify part attributes with the chosen
   editor(Detail Editor or Quick Interaction
   Area.
4)   [   Save Preferences For Part   ]
         Type Chosen To File
```

Generic Attributes:

Click Here To Start   Will allow you to modify default visual part attributes which apply to all part types.

Save General Part Preferences To File   Will write the current generic part preferences to the preference file for future EnSight sessions.

Attributes For Specific Part Types:

Edit Attributes Using   Allows you to specify which area to use for default attribute modification - the *Quick Interaction Area* or the *Detail Editor Dialog*.

Start Editing For Part   Allows the user to specify the part type for which default attributes will be modified.

Save Preferences For Part Type Chosen To File   Will write the current specific part type preferences to the preference file for future EnSight sessions.

(see How To Set Part Preferences:)

Performance Preferences

```
*********************************************
********** Performance Preferences **********
*********************************************
□ Cull Lines
□ Static Fast Display
□ Transparency Re-sort
Detail Repr. Point Resolution(1-100)       [ 1  ]
(1=Draw every point, 2=Draw half, ...)
Detail Repr. Sparse Model Resolution       [ 50 ]
(1=Sparse...100=Full)
[            Save To Preference File            ]
```
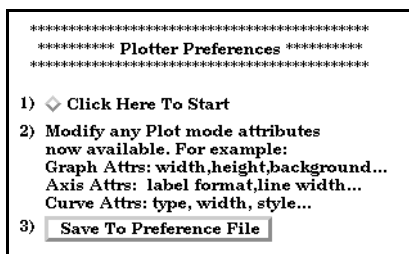
Cull Lines   Will only draw shared lines between polygons once.

Static Fast Display   Will cause the fast representation to always be displayed. If this is off (the default), fast display will only be active during a transformation.

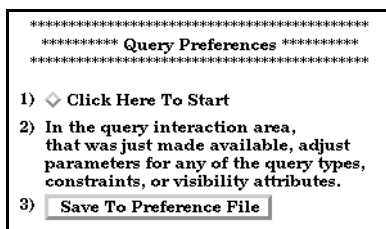|	
Transparency Re-sort	Causes polygons to be resorted with each transformation - so the image is always correct. If not on, the polygons will not be resorted while the mouse is down during transformations, but will be resorted when the mouse is released.
Detail Repr. Point Resolution	Allows specification of fraction of nodes to display in Fast Display, point representation. (The default is "1", indicating all nodes, "2" would be every other node, "3" every third node, etc.)
Detail Repr. Sparse Model Resolution	Allows specification of the percentage of the model geometry that will be displayed.
Save To Preference File	Will write the current performance preferences to the preference file for future EnSight sessions.

(see How To Set Performance Preferences:)

Plotter Preferences

```
***********************************************
********** Plotter Preferences **********
***********************************************

1)  ◇ Click Here To Start
2)  Modify any Plot mode attributes
    now available. For example:
    Graph Attrs: width,height,background...
    Axis Attrs:  label format,line width...
    Curve Attrs: type, width, style...
3)  [ Save To Preference File ]
```

Click Here To Start	Will allow you to modify defaults for the various plotter graph, axis, and curve attributes.
Save To Preference File	Will write the current plotter preferences to the preference file for future EnSight sessions.

(see How To Set Plotter Preferences:)

Query Preferences

```
***********************************************
********** Query Preferences **********
***********************************************

1)  ◇ Click Here To Start
2)  In the query interaction area,
    that was just made available, adjust
    parameters for any of the query types,
    constraints, or visibility attributes.
3)  [ Save To Preference File ]
```

Click Here To Start	Will allow you to modify defaults for the various query attributes.
Save To Preference File	Will write the current query preferences to the preference file for future EnSight sessions.

(see How To Set Query Preferences:)

User Defined Input
Preferences

```
***********************************************
********* User Defined Input Preferences *********
*********          EnSight Gold Only          *********
***********************************************
☐ Macro Panel Interface

☐ User Defined Input Device

Zoom Using  Valuator ☐

  Sensitivity  1.000000

Rotate Using  Mixed Mode ☐

  Sensitivity  1.000000


        Save To Preference File
```

This area provides access to user defined input devices. The input devices include a
Macro Panel Interface (a grid of commands that displays in the Main Graphics window
and executes EnSight command files upon selection), and/or a User Defined Input
Device (a virtual input device designed for - but not limited to - use with VR
environments such as an Immersadesk)

Macro Panel Interface	Toggles on/off the user defined macro panel (defined in your `~/.ensight7/macros/hum.define` file) to the Main Graphics window. (An example hum.define file is located at `$ENSIGHT7_HOME/client/site_preferences/macros/hum.define` on your client system.).
User Defined Input Device	Toggles on/off the User Defined Input Device that is linked via a runtime library. (Steps outlining the implementation of this library and input device are found in the file: `$ENSIGHT7_HOME/client/user_defined_input/README` on your client system.).
Zoom Using	Opens a pull-down menu for selection of the type of input device used for zoom transformations. The type of devices are:

Valuator   a device that returns a value (like a virtual joystick).

Position   a device that returns delta movement in the Z direction (like a wand).

Sensitivity	Specifies a positive scalar value that adjusts the Sensitivity of the type of zoom input device selected in Zoom Using (i.e. values < 1 are slower, and values > 1 are faster).
Rotate Using	Opens a pull-down menu for selection of the type of input device used to record rotation transformations.

Mixed Mode   A device that returns virtual angle values where the Z rotations correspond to (literal) movement of the input device about its local Z (or roll) axis; and where the X and Y rotations correspond to translational movements of the   input device with respect to its local X and Y axes.

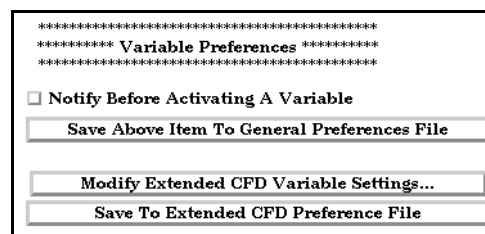|		
	Direct Mode	A device that returns virtual angle values that correspond to (literal) rotational movements of the input device about its local X, Y, and Z axes.
	Sensitivity	Specifies a positive scalar value that adjusts the Sensitivity of the type of rotation input device selected in Rotate Using (i.e. values < 1 are slower, and values > 1 are faster).
		(see How To Enable User Defined Input Devices)
	Save To Preference File	Will write the current user defined input preferences to the preference file for future EnSight sessions.

(see How To Set User Defined Input Preferences:)

Variables Preferences

```
**********************************************
********** Variable Preferences **********
**********************************************
☐ Notify Before Activating A Variable
     Save Above Item To General Preferences File

     Modify Extended CFD Variable Settings...
     Save To Extended CFD Preference File
```

|	
Notify Before Activating A Variable	Will cause you to be notified before a variable, which was going to be automatically activated, is actually activated.
Save Above Item To General Preferences File	Will write the variable notification preference to the preference file for future EnSight sessions.
Modify Extended CFD Variable Settings...	Opens the Extended CFD Variable Settings dialog. If your data defines variables or constants for density, total energy, per unit volume, and momentum (or velocity), it is possible to show new variables defined by these basic variables in the Main Variables List of the GUI by utilizing the capabilities of this dialog.
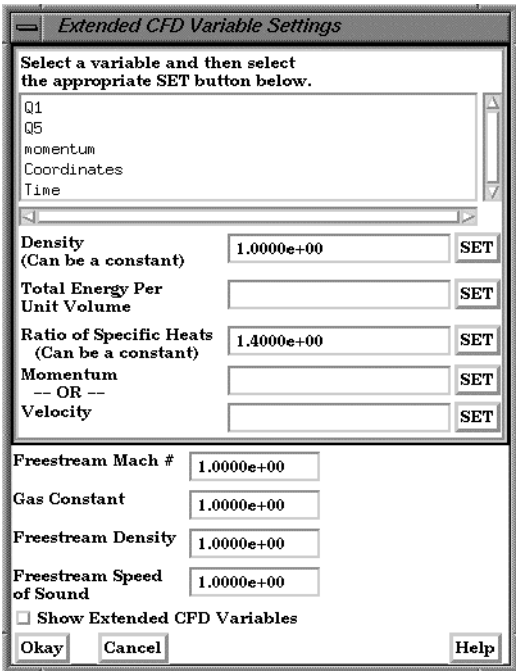
Figure 6-5
Extended CFD Variable Settings Dialog

Density	Permits the selection of the density variable from the list (click SET after selection) or the specification of a constant value in the field provided.
Total Energy Per Unit Volume	Permits the selection of the energy variable from the list. Click SET after selection.
Ratio of Specific Heats	Permits the selection of the ratio of specific heats variable from the list (click SET after selection) or the specification of a constant value in the field provided.
Momentum or Velocity	Permits the selection of the momentum or velocity variable from the list. Click SET after selection.
Freestream Mach #	Permits the specification of the freestream mach number in the field provided.
Gas Constant	Permits the specification of the gas constant in the field provided.
Freestream Density	Permits the specification of the freestream density value in the field provided.
Freestream Speed of Sound	Permits the specification of the freestream speed of sound value in the field provided.
Show Extended	When selected, all of the variables that can be derived from the information entered will be
CFD Variables	Shown in the Main Variables List of the GUI. (will not take effect until the Okay button is clicked.

Okay	Clicking this button applies the changes made in the dialog. (See How To Create New Variables)
Save To Extended CFD Preference File	Will write the current extended CFD preferences to the extended CFD preference file for future EnSight sessions.

(see How To Set Variable Preferences:)

View Preferences
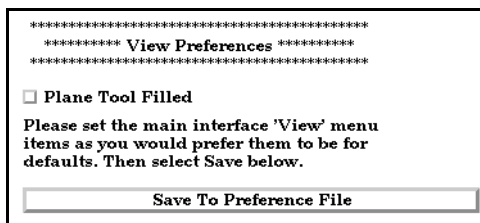
Plane Tool Filled	Will cause the plane tool to be a filled transparent surface. If it is off, the plane tool will be in line drawing mode. You can save this default to the preference file.
Save To Preference File	Will write the current view preferences to the preference file for future EnSight sessions.

(see How To Set View Preferences:)

6.3   Query Menu Functions

Clicking the Query button in the Main Menu opens a pull-down menu which provides access to the following features:
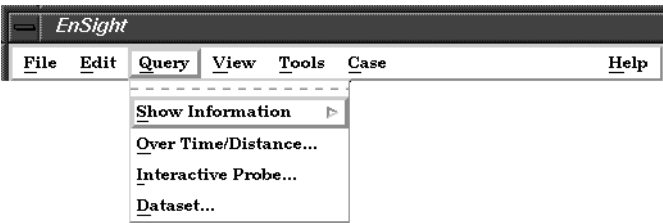
Figure 6-6
Query pull-down menu

EnSight provides several ways to examine information about variable values. You can, of course, visualize variable values with fringes, contours, vector arrows, profiles, isosurfaces, etc. Only parts with data residing on the Server host system may be queried. Thus, parts that reside exclusively on the Client host system (i.e. contours, particle traces, profiles, vector arrows) may NOT be queried.

(see Table 3–2 Part Creation and Data Location)

Show Information Opens the following pull-down menu:
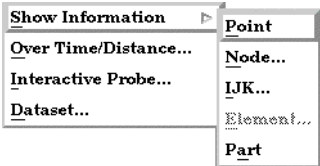
Figure 6-7
Show Information pull-down menu

Access: Main Menu > Query > Show Information

(see How To Get Point, Node, Element and Part Information)

Point Provides the following information in the Status History Area about a Point inside of the selected Part(s) who's position you have specified with the cursor tool:

x,y,z coordinates, Frame assignment of Point, the Part that the Point is found in, the closest Node to the Point, and the specified Variable value at the Point

Access: Main Menu > Query > Show Information > Point

(see How To Get Point, Node, Element and Part Information and How To Use the Cursor (Point) Tool)

Node Opens the Query Prompt dialog which is used to specify Node ID number.
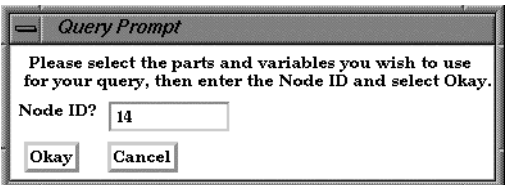

Figure 6-8
Query Prompt dialog

When Okay button is pressed, the following information about the specified Node is shown in the Status History Area:

x,y,z coordinates, Frame assignment of Node, the Part that the Node is found in, and the specified Variable value at the Node

Access: Main Menu > Query > Show Information > Node...

(see How To Get Point, Node, Element and Part Information)

IJK

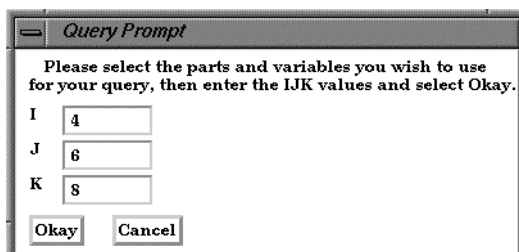Opens the Query Prompt dialog which is used to specify IJK values.

Figure 6-9
Query Prompt for IJK Values

When Okay button is pressed, the following information about the Node specified by the IJK values is shown in the Status History Area:

Node ID, Part in which the Node is located, x,y,z coordinates of the Node, Frame assignment of the Node, and the specified Variable value at the Node.

Access: Main Menu > Query > Show Information > IJK...

(see How To Get Point, Node, Element and Part Information)
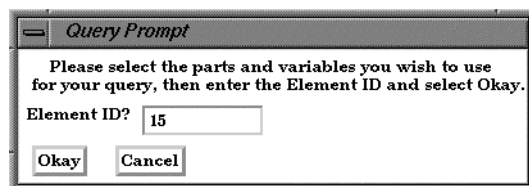
Element

Opens the Query Prompt for Element ID.

Figure 6-10
Query Prompt for Element ID

When Okay button is pressed, the following information about the Element is shown in the Status History Area:

Part in which Element is located, Type of Element, IJK bounds (if a structured mesh), Number of Nodes, Node ID numbers, information on neighboring Elements, and the specified Variable value at the Element.

Access: Main Menu > Query > Show Information > Element...

(see How To Get Point, Node, Element and Part Information)

Part

Causes the following information about the Part to be shown in the Status History Area:

Part type (structured or unstructured), number of Nodes in Part, minimum and maximum x,y,z coordinates, Element type, and the number of Elements.

Access: Main Menu > Query > Show Information > Part

(see How To Get Point, Node, Element and Part Information)

Over Time/Distance

Opens the Query/Plot Editor in the Quick Interaction Area which is used to obtain information about variables and to create plots of the information.

Access: Main Menu > Query > Over Time/Distance...

(see Section 7.11, Query/Plot, How To Query over Time, How To Query Over Distance)

Interactive Probe Opens the Interactive Probe Query Editor in the Quick Interaction Area which is used to obtain information interactively about variables.
Access: Main Menu > Query > Interactive Probe...
(see Section 7.12, Interactive Probe Query and How To Probe Interactively)

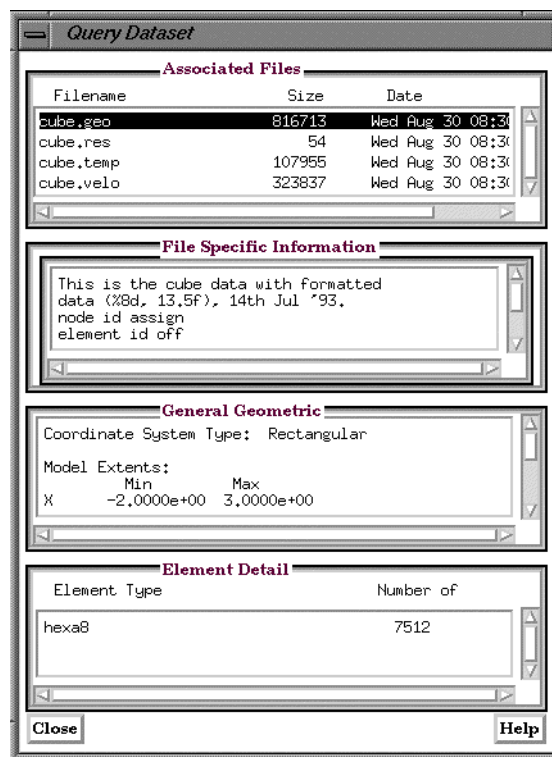*Dataset* Opens the Query Dataset dialog which is used to obtain information about datasets for the selected case.

Figure 6-11
Query Dataset dialog

For the specified file, specific, general and detail information is provided.
Access: Main Menu > Query > Dataset...
(see Section 7.11, Query/Plot and How To Query Datasets)

6.4   View Menu Functions

Clicking the View button in the Main Menu opens a pull-down menu which provides access to the following features:
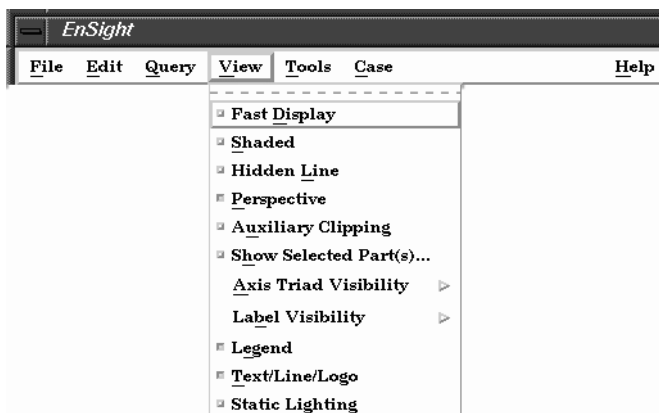

Figure 6-12
View pull-down menu

Fast Display

Toggles the Fast Display mode.
Access: Main Menu > View > Fast Display

Fast Display in this pull-down is the same as the one located on the Desktop.

By default, EnSight displays all of the lines and elements for each part every time the Main View window redraws. If you have very large models (or if you have slow graphics hardware), each redraw can take significant time. As a result, interactive transformations become jerky and lag behind the motion of the mouse. Ironically, the slower the graphics performance, the harder it is to perform precise interactive transformations. To avoid this problem, you can tell EnSight to show a lesser detailed part representation, i.e, a bounding box surrounding each Part, or the Part as a point cloud. You can select to show the detail representation all the time, or only while you are performing transformations. This obviously displays much less information, but may be sufficient if you want to rotate a very large model.

A lesser detail display is also useful when experimenting with keyframe-animation rates. Using lesser detail, the display rate can be adjusted to approximate the video rate, thus you can see how your scene will transform on the video tape

The default setting is off, indicating that all lines and elements of all visible parts will be redrawn. When on, the redraw will show only the part's Fast Display Representation (by default a box). The fast display representation is only used while transformations are being performed. The fast display representation will be continuously displayed if the Static Fast Display option is turned on in:
Main Menu > Prefs > Graphics Window > Static Fast Display.

Shaded Toggle

Toggles the *Global* Shaded mode for parts on and off. (The Shaded Toggle in the View Mode Icon Bar performs the same action.) EnSight by default displays parts in line mode. Shaded mode displays parts in a more realistic manner by making hidden surfaces invisible while shading visible surfaces according to specified lighting parameters. Parts in Shaded mode require more time to redraw than when in line mode, so you may wish to

first set up the Graphics Window as you want it, then turn on Shaded to see the final result.

Access: EnSight dialog > View > Shaded

or   View Mode Icon Bar: Shaded Toggle

or   Desktop > Shaded

(see Section 8.1, View Mode and How To Set Drawing Style)

Troubleshooting Hidden Surfaces and Shading

Problem	Probable Causes	Solutions
Main View shows line drawing after turning on Shaded.	Shaded is toggled off for each individual part.	Toggle Shaded on for individual parts with the Shaded Icon in Part Mode or in the Feature Detail Editor dialog.
	There are no surfaces to shade—all parts have only lines.	If parts are currently in Feature Angle representation, change the representation. If model only has lines, you can not display shaded images.
	The element visibility attributes has been toggled off for the part(s).	Toggle the element visibility on for individual parts in the Feature Detail Editor dialog.

Hidden Line Toggle

Toggles the global Hidden Line display for all parts on/off. (The Hidden Line Toggle icon in the View Mode Icon Bar performs the same action.) This simplifies a line drawing display by making hidden lines - lines behind surfaces - invisible while continuing to display other lines. Hidden Line can be combined with Shaded to display both surfaces and the edges of the visible surface elements. Hidden Line can be toggled on/off for individual parts by using the Hidden Line Toggle icon in the Part Mode Icon Bar.

To have lines hidden behind surfaces, you must have surfaces (2D elements). If the representation of the in-front parts consists of 1D elements, the display is the same whether or not you have Hidden Lines mode toggled-on. During interactive transformations, the display reverts to displaying all lines. When you release the mouse button, the Main View display automatically resumes Hidden Line mode. The Hidden line option will not be active during playback of flipbook animations.

Access: Main Menu > View > Hidden Line

or   View Mode Icon Bar: Hidden Line Toggle

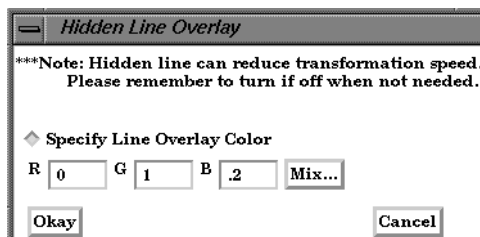(see Section 8.1, View Mode and How To Set Drawing Style)

Hidden Line Overlay dialog

Figure 6-13
Hidden Line Overlay dialog

If you combine Shaded mode with Hidden Line mode, the lines overlay the surfaces. The Hidden Line Overlay dialog will pop-up on the screen if the Shaded option is currently on and you then turn the Hidden Line option on. From this dialog you specify a color for the displayed lines (you do not want to use the same color as the surfaces since they then will be indistinguishable from the surfaces). The default is the part-color of each part, which may be appropriate if the surfaces are colored by a color palette instead of their part-color.

Specify Overlay	Toggle-on if you want to specify an overlay color. If off, the overlay line color will be the same as the part color.
R, G, B	The red, green, and blue components of the hidden line overlay. These fields will not be accessible unless the Specify Overlay option is on.
Mix...	Click to interactively specify the constant color used for the hidden line overlay using the Color Selector dialog. (see Section 7.1, Color and How To Change Color)
Okay	Click to accept the hidden line overlay color options.
Perspective (Global)Toggle	Toggles the view within each of the viewports within the Graphics Window between a perspective view (the default) and an orthographic projection. *Perspective* is what gives you the sense of depth when viewing a three dimensional scene on a two dimensional surface. Objects that are far away look smaller and parallel lines seem to meet at infinity. *Orthographic projection* removes the sense of depth in a scene. Lines that are parallel will never meet and objects of the same size all appear the same no matter how far away they are from you. Orthographic projection mode often helps when you are positioning the Cursor, Line, and Plane tools using multiple viewports. This is the Global toggle. Each viewport also has a Perspective Toggle. Access: Main Menu > View > Perspective (see Section 8.3, VPort Mode and see How To Set Global Viewing)
Auxiliary Clipping Global Toggle	Toggles the Auxiliary Clipping feature on/off. (Default is Off). The Auxiliary Clipping Global Toggle icon in the View Mode Icon Bar performs the same action. Like a Z-Clip plane, Auxiliary Clipping cuts-away a portion of the model. When Auxiliary Clipping is On, Parts (or portions of Parts) located on the back (negative-Z) side of the Plane Tool are removed. Parts whose Clip attribute you have toggled off (in the General Attributes section of the Feature Detail Editor dialog or with the Auxiliary Clipping Toggle Icon in the Part Mode Icon Bar) remain unaffected. Auxiliary Clipping is interactive—the view updates in real time as you move the Plane Tool around (see Section 6.5, Tools Menu Functions and How To Use the Plane Tool).

Unlike a Z-Clip plane, Auxiliary Clipping applies only to the parts you specify, and the plane can be located anywhere with any orientation though it is always infinite in extent (see Section 9.5, Z-Clip and How To Set Z Clipping).

Auxiliary Clipping is helpful, for example, with internal flow problems since you can "peel" off the outside parts and look inside. This capability is also often useful in animation.

The position of the Plane Tool and the status of Auxiliary Clipping is the same for all displayed viewports.

Do not confuse Auxiliary Clipping with a 2D-Clip plane, which is a created part whose geometry lies in a plane cutting through its parent parts or with the Part operation of cutting a part.
(see Section 3.4, Part Operations, How to Create Plane Clips, and How To Cut a Part).

Troubleshooting Auxiliary Clipping

Problem	Probable Causes	Solutions
The Plane Tool does not appear to clip anything	The Auxiliary Clipping toggle is off for all parts.	Turn the Auxiliary Clipping toggle on for individual parts in the Feature Detail Editor (Model) dialog General Attributes section.
	The Plane Tool is not intersecting the model	Change the position of the Plane Tool.
The Main View window shows nothing other than the Plane Tool after Clipping is toggled-on.	All of the part(s) is(are) on the back side of the Plane Tool and is(are) thus clipped	Change the position of the Plane Tool.

Axis Triad Visibility　Opens the pull-down menu which allows you to toggle on/off the visibility of the Global axis triad and the axis triads for all Frames.

Frame Toggle　Toggles on/off (default is On) the display of all coordinate Frame axis triads. (The All Frame Axis Triad Visibility Toggle icon in the Frame Mode Icon Bar performs the same function.)The visibility of individual coordinate Frame axes can be selectively turned on/off by clicking on the Frame's axis triad and then clicking on the Frame Axis Triad Visibility Toggle in the Frame Mode Icon Bar.
Access:　　Main Menu > View > Axis Visibility > Axis - Local
(see Section 8.6, Frame Mode)

Global Toggle　Toggles on/off (default is Off) the display of the global coordinate frame axis. (The Global Axis Visibility Toggle icon in the Frame Mode Icon Bar performs the same function.)The global coordinate frame axis triad represents the Look-At Point.
Access:　　Main Menu > View > Axis Visibility > Axis - Global
(see Section 8.1, View Mode)

Label Visibility　Opens the pull-down menu which allows you to toggle on/off the visibility of labels for Elements or Nodes.

Element Labeling Toggle	Toggles on/off (default is Off) the global visibility of labels (if they are available in the dataset) for elements in all parts. (The Element Label Toggle in the View Mode Icon Bar performs the same function.) Visibility of element labels for individual parts can be controlled in the Node, Element, and Line Attributes section of the Feature Detail Editor (Model). Access: Main Menu > View > Label Visibility > Element Labeling (see Section 8.1, View Mode)
Node Labeling Toggle	Toggles on/off (default is off) the global visibility of labels (if they are available in the dataset) for nodes in all parts. (The Node Label Toggle in the View Mode Icon Bar performs the same function). Visibility of node labels for individual parts can be controlled in the Node, Element, and Line Attributes section of the Feature Detail Editor (Model). Access:Main Menu > View > Label Visibility > Node Labeling (see Section 8.1, View Mode)
Legend Toggle	Toggles on/off (default is on) the global visibility of all legends. (the Legend Visibility Toggle Icon in the Annotation Mode Icon Bar performs the same function). Visibility of individual legends can be controlled by using the Show Legend button above the Feature Icon Bar. Clicking the Show Legend button will make visible only those legends for variables which are selected in the Variables List, and then only if Legend Visibility is toggled on. If a Legend has been made visible by selecting a variable and then clicking the Show Legend button, deselecting the variable and clicking the Show Legend button again will turn visibility off for that individual legend. Access: Main Menu > View > Legend (see Section 4.2, Variable Summary & Palette, Section 8.2, Annot Mode and How To Create Color Legends.
Text/Line/Logo Toggle	Toggles on/off global visibility for text strings and lines which have been created and logos which have been imported. (The Text/Line/Logo Visibility Icon in the Annotation Mode Icon Bar performs the same function). Visibility of individual Text strings, Lines, or Logos can be controlled by selecting the item while in Annotation Mode and clicking the Visibility Toggle in the Annotation Mode Icon Bar. While in Annot Mode, you will notice that the item does not disappear, but turns transparent. Such items will not appear in the Graphics Window in any Mode except Annotation Mode, and then only if global visibility has been turned on. Access: Main Menu > View > Text/Line/Logo (see Section 8.2, Annot Mode, How To Create Lines and Arrows, How To Create Text Annotation, and How To Load Custom Logos.
Static Lighting	Toggles on/off whether the light source moves as the model transforms, or instead remains stationary. Static lighting only affects shaded surfaces (i.e., Hidden Surfaces mode is toggled-on).When the Static Lighting option is *off* (the default), the light source remains fixed as you transform the model. Your graphics hardware performs the lighting calculations *each time the Graphics Window redraws*. When the Static Lighting option is on, the light source moves with the model (it is the lighting *of the model* that remains "static"). EnSight performs the lighting equations *once*. This can greatly improve graphics performance, especially when color fringes are on in which case the performance boost may be as much as a factor of five. Also, memory requirements are somewhat less with Static Lighting, an important point to remember if you are loading flipbook animation pages as objects. However, keep in mind that this performance improvement comes at the cost of realism since the display's lighting does not update when the scene moves. Access: Main Menu > View > Static Lighting

6.5   Tools Menu Functions

The Cursor, Line, Plane, and Quadric (cylinder, sphere, cone, and revolution) Tools in EnSight are used for a variety of tasks, such as: positioning of clipping planes and lines, query operations, particle trace emitters, etc. Collectively these tools are referred to as Positioning Tools. Clicking the Tools button in the Main Menu opens a pull-down menu which provides access to these features:
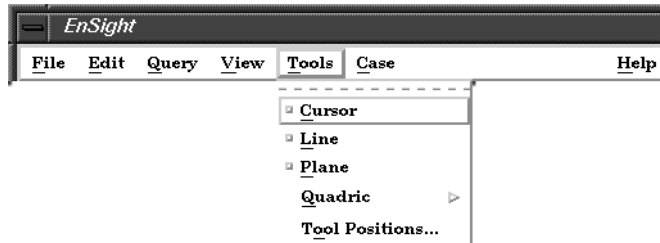

Figure 6-14
Tools pull-down menu

Cursor Tool Toggle

Makes the Cursor Tool visible/invisible in the Graphics Window. The Cursor Tool appears as a three-dimensional cross colored red, green, and blue. The red axis of the cross corresponds to the X axis direction for the currently selected Frame, while green matches the Y and blue matches up with the Z. The Cursor Tool is initially located at the Look-At point and may be repositioned interactively in the Graphics Window by selecting and dragging it or by selecting Pick Cursor Location from the Pick Pull-down Icon menu in the Part Mode Icon Bar. Alternatively, you can reposition it precisely by specifying coordinates in the Transformation Editor dialog (described in Tool Positions... Cursor Mode below).
Access: Main Menu > Tools > Cursor
or   Desktop > Cursor
(see Section 8.4, Part Mode and How to Use the Cursor (Point) Tool)

Line Tool Toggle

Makes the Line Tool visible/invisible in the Graphics Window. The Line Tool appears as a white line with a cross at the center point. The Line Tool is initially centered about the Look-At point and sized so that it fills approximately 10% of the default view. You can change its length and orientation interactively in the Graphics Window by selecting one of its end points. You can reposition it interactively in the Graphics Window by selecting its center and dragging it or by selecting Pick Line Location from the Pick Pulldown Icon menu in the Part Mode Icon Bar. Alternatively, you can reposition it precisely by specifying coordinates in the Transformation Editor dialog (described in Tool Positions... Line Mode below).
Access: Main Menu > Tools > Line
or   Desktop > Line
(see Section 8.4, Part Mode and How to Use the Line Tool)

Plane Tool

Makes the Plane Tool visible/invisible in the Graphics Window. (*Note: Its appearance (line or filled) is controlled under Main Menu > Prefs > Tools*)
Access: Main Menu > Tools > Plane
or   Desktop > Plane

The Plane Tool is shown with an X, Y, Z axis system, is initially centered about the Look-At point, and lies in the X-Y plane. You can reposition it interactively in the Graphics Window by selecting its center point in the Graphics Window and dragging it or by selecting Pick Plane Location from the Pick Pull-down Icon menu in the Part Mode Icon Bar. Alternatively, you can reposition it precisely by specifying coordinates in the

Transformation Editor dialog (described in Tool Positions... Plane Mode below). You can change its orientation interactively in the Graphics Window by selecting the X, Y, or Z letters at the ends of the axes. You can resize the Plane Tool interactively in the Graphics Window by selecting the corner or the plane between the ends of the X and Y axes. (see Section 8.4, Part Mode and How to Use the Plane Tool)

Quadric

Opens a pull-down menu which allows you to choose one of the Quadric Tools and make it visible.

Access:　　　Main Menu > Tools > Quadric
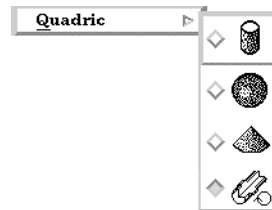
Figure 6-15
Quadric Tool pull-down menu

Cylinder Tool Toggle

Makes the Cylinder Tool visible/invisible in the Graphics Window. The Cylinder Tool appears as thick direction line with center point and a circle around the line at the mid and two end points. Thinner projection lines run parallel to the direction line through the three circles outlining the surface of the cylinder. The Cylinder Tool is initially centered about the Look-At point with the direction line pointing in the X direction. You can change its length and orientation interactively in the Graphics Window by selecting one of its end points. You can change its diameter by selecting the circle about the mid point. You can reposition it interactively in the Graphics Window by selecting its center or alternatively, you can reposition it precisely by specifying coordinates in the Transformation Editor dialog (described in Tool Positions... Quadric below).

Access:　　　Main Menu > Tools > Quadric
(see How to Use the Cylinder Tool)

Sphere Tool Toggle

Makes the Sphere Tool visible/invisible in the Graphics Window. The Sphere Tool appears as thick direction line with several circles outlining the sphere. The Sphere Tool is initially centered about the Look-At point with the direction line pointing in the X direction. You can change its radius and orientation interactively in the Graphics Window by selecting one of the thick direction line end points. You can reposition it interactively in the Graphics Window by selecting its center or alternatively, you can reposition it precisely by specifying coordinates in the Transformation Editor dialog (described in Tool Positions... Quadric below).

Access:Main Menu > Tools > Quadric
(see How to Use the Sphere Tool)

Cone Tool Toggle

Makes the Cone Tool visible/invisible in the Graphics Window. The Cone Tool appears as thick direction line with a circle at the end point. Thinner projection lines run from the beginning point to the circle at the end point outlining the surface of the cone. The Cone Tool is initially centered about the Look-At point with the direction line pointing in the X direction. You can change its length and orientation interactively in the Graphics Window by selecting one of the thick direction line end points. You can change its diameter by selecting the largest circle about the end point. You can reposition it interactively in the Graphics Window by selecting its center or alternatively, you can reposition it precisely by specifying coordinates in the Transformation Editor dialog (described in Tool Positions... Quadric below).

Access:　　　Main Menu > Tools > Quadric
(see How to Use the Cone Tool)

Revolution Tool Toggle	Makes the Surface of Revolution Tool visible/invisible in the Graphics Window. The Revolution Tool appears as thick direction line with several circles outlining each user defined point along the tool. Thinner projection lines run through the circles to outline the revolution surface. The Revolution Tool is initially centered about the Look-At point with the direction line pointing in the X direction. You can change its length and orientation interactively in the Graphics Window by selecting one of the thick direction line end points. You can reposition it interactively in the Graphics Window by selecting its center or alternatively, you can reposition it precisely by specifying coordinates in the Transformation Editor dialog (described in Tool Positions... Quadric below).

Access: Main Menu > Tools > Quadric
(see How to Use the Surface of Revolution Tool)

Tool Positions...	Opens the Transformation Editor dialog which allows you to precisely position the various tools within the Graphics Window in reference to the selected Frame.

Access: Main Menu > Tools > Tool Positions...

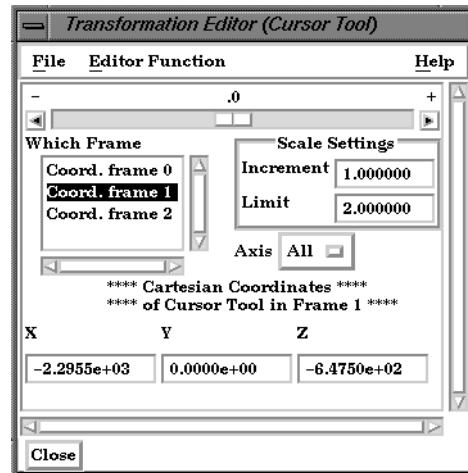|	
Cursor Tool	Clicking on Editor Function in the Transformation Editor dialog and then selecting Tools > Cursor from the pull-down menu configures the dialog as shown below.

Figure 6-16
Transformation Editor (Cursor)

The Transformation Editor dialog provides three methods for the precise positioning of the Cursor Tool. First, the Cursor Tool may be positioned within the Graphics Window by entering coordinates in the X, Y, and Z fields. Pressing return causes the Cursor Tool to relocate to the specified coordinates in the selected Frame (or, if more than one Frame is selected, for Frame 0).

It is also possible to reposition the Cursor Tool from its present coordinate position by specific increments. The Axis Button allows you to choose the axis of translation (X, Y, Z, or All). The Slider Bar at Top allows you to quickly choose the increment by which to move the position of the Cursor Tool. Dragging the slider in the negative (left) or positive (right) directions and then releasing it will cause the X, Y, and Z coordinate fields to increment as specified and the Cursor Tool to relocate to the new coordinates. The number specified in the Limit field of the Scale Settings area determines the negative (-) and positive (+) range of the slider. If the Limit is set to 1.0 as shown, then the numerical range of the slider bar will be -1 to +1.

Alternatively, you can specify an increment for translation in the Increment field of the Scale Settings area. Pressing return while the mouse pointer is in the Increment field will cause the Cursor Tool to translate along the specified axis (or all axes) by the increment

specified.
Access: Transformation Editor > Editor Function > Tools > Cursor
(see How to Use the Cursor (Point) Tool)

Line Tool

Clicking on Editor Function in the Transformation Editor dialog and then selecting Tools > Line from the pull-down menu configures the dialog as shown below.
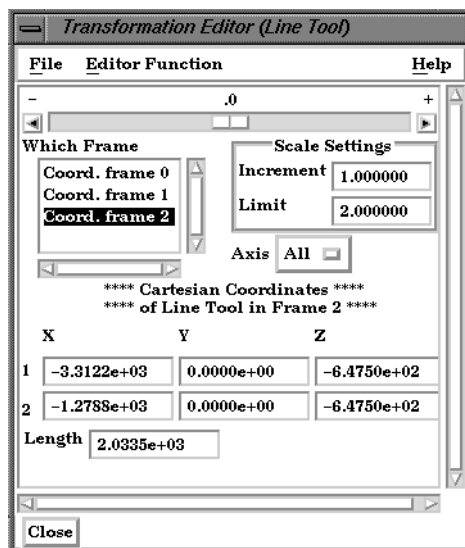

Figure 6-17
Transformation Editor (Line Tool)

The Transformation Editor dialog provides three methods for the precise positioning of the Line Tool. First, the Line Tool may be positioned within the Graphics Window by entering coordinates for the two endpoints in the X, Y, and Z fields. Pressing return causes the Line Tool to relocate to the specified coordinates in the selected Frame (or if more than one Frame is selected, in Frame 0).

It is also possible to reposition the Line Tool from its present coordinate position by specific increments. The Axis Button allows you to choose the axis of translation for the center of the line (X, Y, Z, or All). The Slider Bar at Top allows you to quickly choose the increment by which to move the position of the center point of the Line Tool. Dragging the slider in the negative (left) or positive (right) directions and then releasing it will cause the X, Y, and Z coordinate fields to increment as specified and the Line Tool to relocate to the new coordinates. The number specified in the Limit field of the Scale Settings area determines the negative (-) and positive (+) range of the slider. If the Limit is set to 1.0 as shown, then the numerical range of the slider bar will be -1 to +1.

Alternatively, you can specify an increment for translation in the Increment field of the Scale Settings area. Pressing return while the mouse pointer is in the Increment field will cause the center point of the Line Tool to translate along the specified axis (or all axes) by the increment specified.

Access: Transformation Editor > Editor Function > Tools > Line
(see How to Use the Line Tool)

Plane Tool

Clicking on Editor Function in the Transformation Editor dialog and then selecting Tools > Plane from the pull-down menu configures the dialog as shown below.
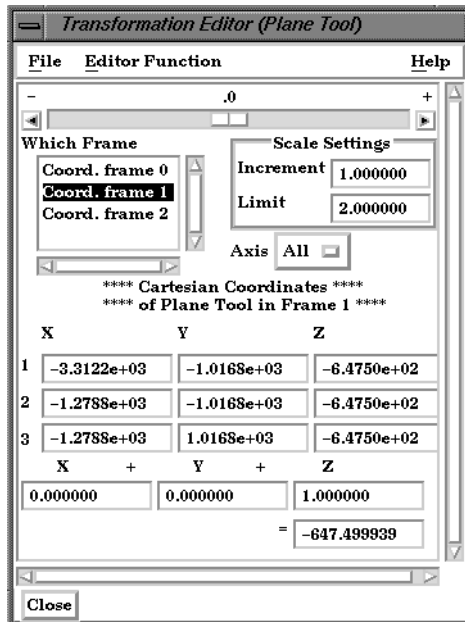

Figure 6-18
Transformation Editor (Plane Tool)

The Transformation Editor dialog provides four methods for the precise positioning of the Plane Tool. First, the Plane Tool may be positioned within the Graphics Window by entering coordinates for the three corners of the plane in the X, Y, and Z fields. Corner 1 is defined as the -X, -Y corner of the plane, Corner 2 is defined as the +X, -Y corner of the plane, and Corner 3 is defined as the +X, +Y corner of the plane. Pressing return causes the Line Tool to relocate to the specified coordinates in the selected Frame (or if more than one Frame is selected, in Frame 0).

You can also position the Plane Tool by entering a plane equation in the form $A_x + B_y + C_z = D$ in the X+Y+Z fields and then pressing Return. The coefficients of the plane equation are in reference to the selected Frame (or if more than one Frame is selected, to Frame 0).

As with the Cursor and Line Tools, it is possible to reposition the Plane Tool from its present coordinate position by specific increments. The Axis Button allows you to choose the axis of translation (X, Y, Z, or All) for the origin of the Plane Tool (intersection of the axes). The Slider Bar at Top allows you to quickly choose the increment by which to move the position of the origin. Dragging the slider in the negative (left) or positive (right) directions and then releasing it will cause the X, Y, and Z coordinate fields to increment as specified and the origin of the Plane Tool to relocate to the new coordinates. The number specified in the Limit field of the Scale Settings area determines the negative (-) and positive (+) range of the slider. If the Limit is set to 1.0 as shown, then the numerical range of the slider bar will be -1 to +1.

Alternatively, you can specify an increment for translation in the Increment field of the Scale Settings area. Pressing return while the mouse pointer is in the Increment field will cause the center of the Plane Tool to translate along the specified axis (or all axes) by the increment specified.

Access: Transformation Editor > Editor Function > Tools > Plane
(see How to Use the Plane Tool)

Cylinder or Sphere Tools

Clicking on Editor Function in the Transformation Editor dialog and then selecting Tools and then Cylinder or Sphere from the pull-down menu configures the dialog as shown below.
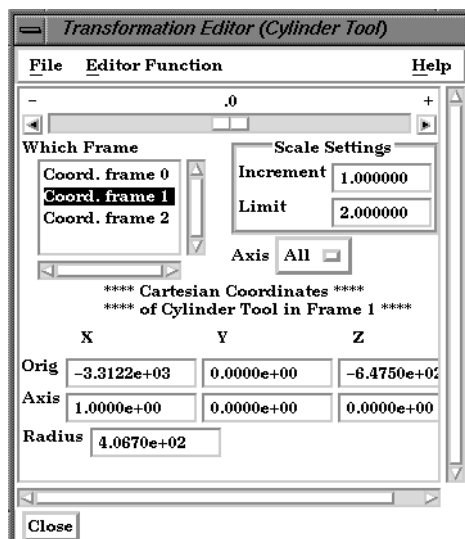

Figure 6-19
Transformation Editor (Cylinder Tool) or (Sphere Tool)

The Transformation Editor dialog enables you to precisely control the coordinates of the Cylinder or Sphere Tool origin (center point of the thick direction line) by specifying them in the Orig. X, Y, and Z fields. You control the direction vector for the Cylinder or Sphere Tool direction axes by specifying the coordinates in the Axis X, Y, and Z fields of the selected Frame (or if more than one Frame is selected, in Frame 0). The Radius of each tool may be specified in the Radius Field.

It is possible to reposition the Cylinder or Sphere Tool origins by specific increments. The Axis Button allows you to choose the axis of translation (X, Y, Z, or All) for the origin of the tool. The Slider Bar at Top allows you to quickly choose the increment by which to move the position of the origin. Dragging the slider it in the negative (left) or positive (right) directions and then releasing it will cause the X, Y, and Z coordinate fields to increment as specified and the origin of the Cylinder or Sphere Tool to relocate to the new coordinates. The number specified in the Limit field of the Scale Settings area determines the negative (-) and positive (+) range of the slider. If the Limit is set to 1.0 as shown, then the numerical range of the slider bar will be -1 to +1.

Alternatively, you can specify an increment for translation in the Increment field of the Scale Settings area. Pressing return while the mouse pointer is in the Increment field will cause the origin of the Cylinder or Sphere Tool to translate along the specified axis (or all axes) by the increment specified.
Access: Transformation Editor > Editor Function > Tools > Cylinder or Sphere
(see How To Use the Cylinder Tool and How To use the Sphere Tool)

Cone Tool

Clicking on Editor Function in the Transformation Editor dialog and then selecting Tools and then Cone from the pull-down menus configures the dialog as shown below.
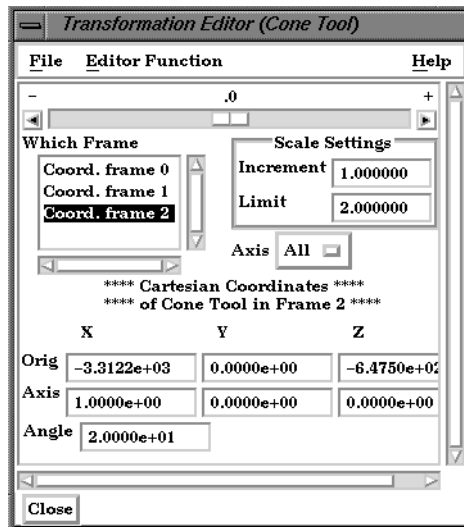

Figure 6-20
Transformation Editor (Cone Tool)

The Transformation Editor dialog enables you to precisely control the coordinates of the Cone Tool origin (center point of the thick direction line) by specifying them in the Orig. X, Y, and Z fields. You control the direction vector for the Cone Tool direction axis by specifying the coordinates in the Axis X, Y, and Z fields for the selected Frame (or if more than one Frame is selected, in Frame 0). The Angle of the tool may be specified in the Angle Field.

It is possible to reposition the Cone Tool origin by specific increments. The Axis Button allows you to choose the axis of translation (X, Y, Z, or All) for the origin of the tool. The Slider Bar at Top allows you to quickly choose the increment by which to move the position of the origin. Dragging the slider in the negative (left) or positive (right) directions and then releasing it will cause the X, Y, and Z coordinate fields to increment as specified and the origin of the Cone Tool to relocate to the new coordinates. The number specified in the Limit field of the Scale Settings area determines the negative (-) and positive (+) range of the slider. If the Limit is set to 1.0 as shown, then the numerical range of the slider bar will be -1 to +1.

Alternatively, you can specify an increment for translation in the Increment field of the Scale Settings area. Pressing return while the mouse pointer is in the Increment field will cause the center of the Cone Tool to translate along the specified axis (or all axes) by the increment specified.

Access: Transformation Editor > Editor Function > Tools > Cone
(see How to Use the Cone Tool)

Revolution Tool

Clicking on Editor Function in the Transformation Editor dialog and then selecting Tools and then Revolution from the pull-down menu configures the dialog as shown below.
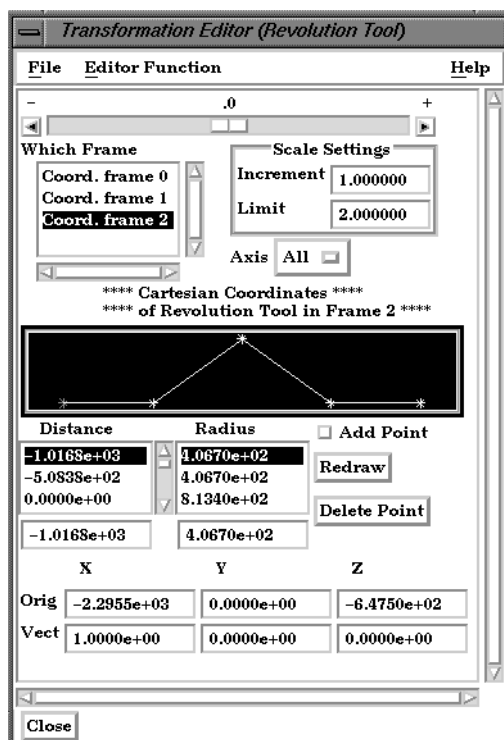

Figure 6-21
Transformation Editor (Revolution Tool)

For the Revolution Tool, you not only control the origin and direction vector, but the number of points and positions that are revolved about the axis.The desired coordinates of the Revolution Tool origin (center point of the thick direction line) are specified in the Orig. X, Y, and Z fields. The direction vector for the Revolution Tool direction axis is specified by entering the desired coordinates in the Vect X, Y, and Z fields for the selected Frame (or if more than one Frame is selected, in Frame 0).

Additional points may be added to the Revolution Tool by clicking on the Add Point(s) toggle and then clicking at the desired location in the schematic for the tool. There is no need to be overly precise in its placement since its location can be modified. Once you have added all of the new points you wish, the Add Point(s) toggle should be turned off. A point may be deleted by selecting it in the schematic area and then clicking the Delete button.

The position of any point may be modified interactively within the Revolution Tool schematic window, Simply click on and drag the point to the desired location. The precise location of any point may be specified by selecting the point in the schematic with the mouse and then entering the desired Distance (from the Revolution Tool origin) or Radius (from the axis) for the point in the text entry fields beneath the Distance and Radius Lists. Pressing return will enter the new value in the list above for the selected point.

It is possible to reposition the Revolution Tool origin by specific increments. The Axis Button allows you to choose the axis of translation (X, Y, Z, or All) for the origin of the tool. The Slider Bar at Top allows you to quickly choose the increment by which to move the position of the origin. Dragging the slider in the negative (left) or positive (right) directions and then releasing it will cause the X, Y, and Z coordinate fields to increment as specified and the origin of the Revolution Tool to relocate to the new coordinates. The

number specified in the Limit field of the Scale Settings area determines the negative (-) and positive (+) range of the slider. If the Limit is set to 1.0 as shown, then the numerical range of the slider bar will be -1 to +1.

Alternatively, you can specify an increment for translation in the Increment field of the Scale Settings area. Pressing return while the mouse pointer is in the Increment field will cause the center of the Revolution Tool to translate along the specified axis (or all axes) by the increment specified.

Redraw

This button will cause the Revolution Tool schematic window to re-center to the currently defined points of the tool.

Access: Transformation Editor > Editor Function > Tools > Revolution
(see How to Use the Surface of Revolution Tool)

6.6 Case Menu Functions

EnSight allows you to work concurrently with up to eight different sets of results data (computational or experimental). Each set of results data is read in as a "Case".

Clicking the Case button in the Main Menu opens a pull-down menu which provides access to the following features:

Figure 6-22
Case pull-down menu

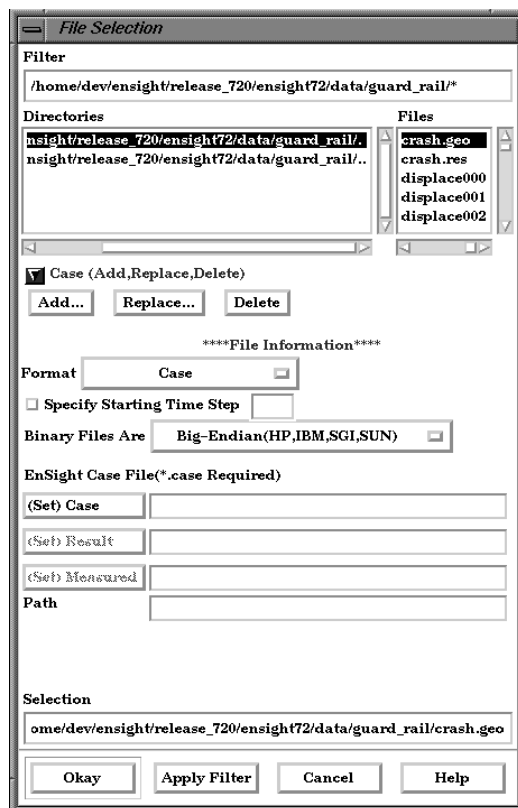*Add, Replace, Delete...* Opens the File Selection dialog.

Figure 6-23
File Selection Dialog to Add, Replace or Delete a Case

Case Turndown Button

Add...   Opens a small dialog which allows you to specify a name for the new Case. This name will appear in the list of active Cases at the bottom of the Main Menu: Case pull-down menu as shown in Figure 6-24 above. Adding a Case actually starts a new EnSight Server and connects it to the EnSight Client. You then read and load data files for the new Case and the data will be added to the data already present in the EnSight Client.

Replace...	Replacing a Case causes all parts and variables associated with the active Case to be deleted. The Server will be restarted and assigned the new Case name. Clicking the Replace... button opens a small dialog which allows you to specify a name for the Case you wish to use to replace the Case currently selected in the Main Menu: Case pull-down menu as shown in Figure 6-24 above. You then read and load data for the new Case.
Delete	Deleting a Case causes all parts and variables associated with the Case to be deleted and terminates the Server associated with the Case. Clicking the Delete button opens a Warning Dialog which asks you to confirm that you wish to delete the Case currently selected in the Main Menu: Case pull-down menu as shown in Figure 6-24 above. (see How To Load Multiple Datasets (Cases))
Viewport Visibility...	Opens the Case Visible In Which Viewport dialog which allows you to specify in which Viewports (including the Main Graphics Window) you wish to make the parts associated with the currently selected Case visible. Parts associated with the selected Case will be visible in the viewports outlined in green and invisible in those outlined in red. Visibility for specific Parts can of course be toggled on/off using the Part Visibility Icon in the Part Mode Icon Bar. (see Part Visibility Toggle Icon in Section 8.4, Part Mode)
Restrict List Info. Per Case Toggle	Toggling this menu selection on will restrict all lists displayed in EnSight (such as the Parts and variables Lists) to show only information pertaining to the Case currently selected in the Main Menu: Case pull-down menu as shown in Figure 6-24 above.
	Finally, at the bottom of the pull-down menu you will find a list of active Cases, The toggle buttons allow the selection of only one Case at a time. In figure 6-24 above, Case 1 is the currently selected Case. The current selected Case is the one which will be affected by the Data Reader, Querys, and many other operations.

6.7   Help Menu Functions

Clicking the Help button in the Main Menu opens a pull-down menu which provides access to the following features:
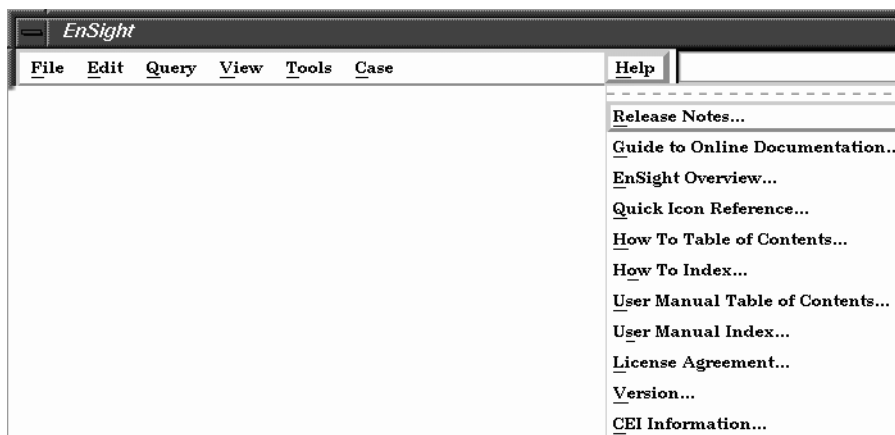

Figure 6-24
Help pull-down menu

Release Notes...	Provides an overview of changes made since the last EnSight release.
Guide to Online Documentation...	Provides a guide to the use of the On-Line Documentation.
EnSight Overview...	Provides an overview of EnSight.
Quick Icon Reference...	Provides a quick reference guide to all EnSight GUI icons, many of which have links to appropriate How To documents
How To Table of Contents...	Opens up On-Line Documentation to the Table of Contents for the How To section.
How To Index...	Opens up On-Line Documentation to the Index for the How To section.
User Manual Table of Contents...	Opens up On-Line Documentation to the Table of Contents for the User Manual.
User Manual Index...	Opens up On-Line Documentation to the Index for the User Manual.
License Agreement...	Opens up On-Line Documentation to the text of the EnSight End User License Agreement and the EnSight Support and Maintenance Service Agreement.
Version...	Opens up the Version Information dialog which states the version number of the EnSight software currently running.
CEI Information...	Opens up the CEI Information display which gives full CEI contact information.